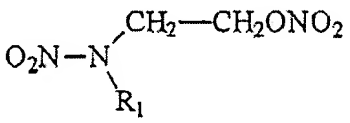
IN THE CLAIMS:

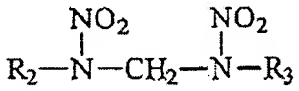
Claims 1-13 (canceled).

14. (Currently amended) A ~~functional~~ high[[ly]] energetic material with layered grain structure, comprising ~~formed with a high energy plasticizer introduced into~~ a green powder which is unprocessed nitrocellulose powder and into which is introduced a high energy plasticizer and a polymeric deterrent,

wherein ~~characterized in that~~ the high-energy plasticizer has the structure I or II, ~~with~~ wherein R_1 = C_1-C_{10}-alkyl, C_1-C_{10}-alkoxy or aryl, R_2 and R_3 independently of each other is ~~have~~ C_1-C_5-alkyl or C_1-C_5 alkoxy and is used in amounts of 5-20% relative to the green powder[[.]]:



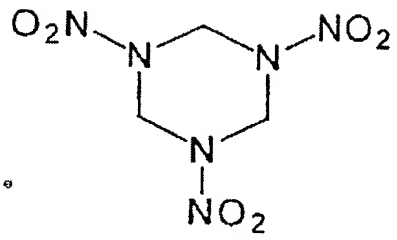
(I)



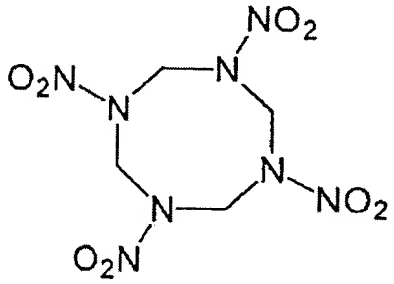
(II)

15. (Currently amended) A ~~functional,~~ high-energetic material according to claim 14, characterized in that the green powder is produced by extruding a solvent-containing ~~powder~~ dough of nitrocellulose, wherein the solvent-containing ~~powder~~ dough contains ~~substances with~~ at least one compound of the structure[[s]] IV, V, or VI, which at least one compound comprises ~~forms a total share of~~ 10-60% of the ~~dry~~ ~~substance for~~

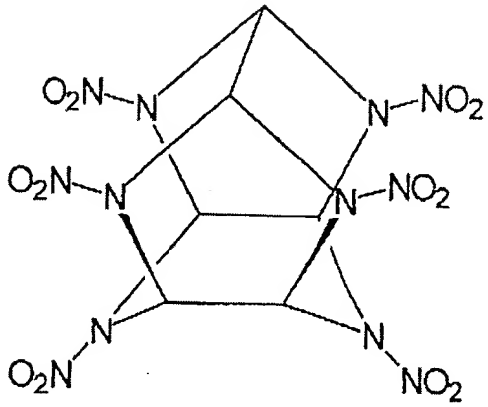
~~the powder~~ dough (on a dry basis)[[.]] wherein the formula of structures IV, V or VI are as follows:



(IV)



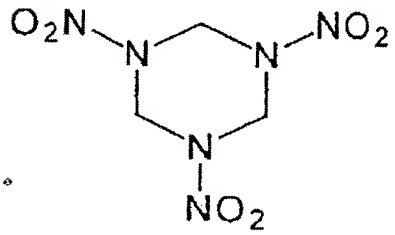
(V)



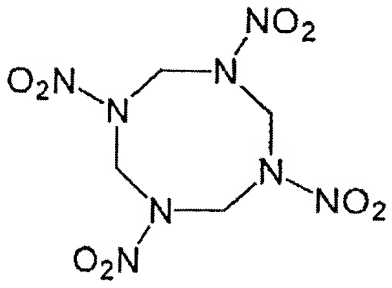
(VI)

16. (Currently amended) A green grain for producing a functional high-energetic material with layered grain structure, containing a high-energy plasticizer and a polymeric deterrent, wherein the green grain is formed by extruding a solvent-containing

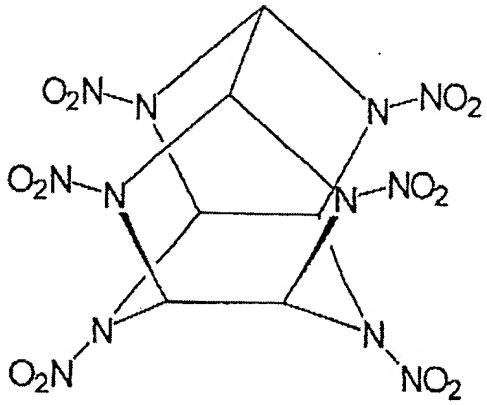
~~powder~~ dough of nitrocellulose, characterized in that the solvent containing ~~powder~~ dough comprises at least one compound with the structure IV, V or VI and which comprise 10-60 % of the ~~powder~~ dough (dry basis) [[.]]



(IV)



(V)



(VI)

17. (Currently amended) A propellant powder comprising a high-energetic material in accordance with claim 14.

18. (Currently amended) Ammunition comprising a propellant powder according to claim 17.

19. (Currently Amended) A method for producing a functional, high-energetic material having a layered grain structure and containing an energetic plasticizing agent and a polymeric desensitizing agent, comprising the steps of:

a) providing an energetic plasticizing agent in the form of a solution or in the form of an emulsion comprising water;

b) providing a polymeric desensitizing agent in the form of a solution or in the form of an emulsion comprising water;

c) providing a receptive grain which will absorb an emulsion,

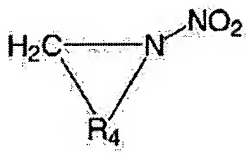
d) diffusing at least one emulsion comprising ~~of~~ said energetic plasticizing agent or said polymeric desensitizing agent into the receptive grain to produce the layered grain structure.

20. (Previously Added) A method according to claim 19, wherein the receptive grain comprises at least 80% nitrocellulose with a nitrogen content of 11-13.5%.

21. (Previously Added) A method according to claim 19, wherein the receptive grain has a cylindrical structure with a diameter to length ratio of between 0.5 and 2.0, an outside diameter between 0.5 and 10 mm and contains at least one hole.

22. (Previously Added) A method according to claim 21, wherein said at least one hole has a hole diameter between 0.03 and 0.7 mm.

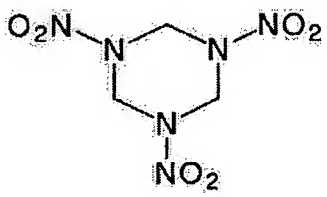
23. (Previously Added) A method according to claim 19, which further comprises producing the receptive grain by compressing a solvent-containing powder dough of nitrocellulose in a molding press or by extruding it, wherein the solvent-containing powder dough contains at least one substance with the general structure



(III)

wherein $R_4 = (-CH_2\text{-}N\text{-}NO_2)_n$ and n = 2 or 3, wherein said at least one substance is present in an amount of 5-80% based on a dry weight of the powder dough.

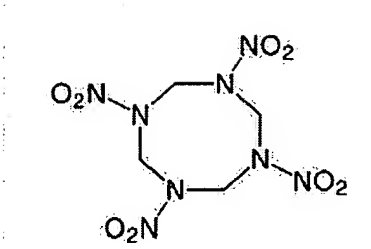
24. (Previously Added) A method according to claim 23, wherein said at least one substance has a structure selected from the group consisting IV, V and VI , wherein IV is



(IV)

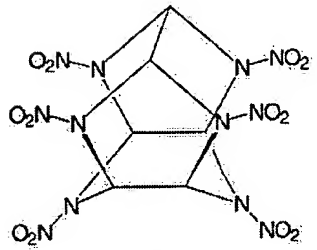
;

wherein V is



(V) ;

and wherein VI is



(VI)

and wherein the said at least one substance is present in the absorbent grain in an amount which is between 10-60%.

25. (Previously Added) A method according to claim 19, wherein a diffusion depth of at least one of said energetic plasticizing agent or said polymeric desensitizing agent in the receptive grain is in the range of 100-500 μm.

26. (Previously Added) A method according to claim 19, further comprising the steps of:

a) adding the high-energy plasticizing agent in an organic solvent to a mixture of receptive grains in water;

b) admixing the desensitizing agent in water.

27. (Previously Added) A method according to claim 26, wherein the adding of the high-energy plasticizing agent and the admixing of the desensitizing agent in water is undertaken at a temperature between 20-85°C.

28. (Previously Added) A method according to claim 27, further comprising

a) pre-soaking receptive grains in an organic solvent in a reactor;

b) stirring during a period of 4-24 hours at a temperature of 20-85°C prior to adding the solution or emulsion of high-energy plasticizing agent, which is liquid at room temperature.

29. (Previously Added) A method according to claim 26, wherein the receptive grains are placed into 1 to 5 times the amount by weight of water.

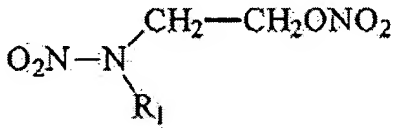
30. (Previously Added) A method according to claim 26, which is conducted in a reactor tank, wherein after the step of admixing the desensitizing agent,

a) the pressure in the reactor tank is reduced to 400-800 mbar during a period of 2-6 hours to allow liquid components to drain out through a strainer in a bottom of the reactor tank and

b) a resulting powder mass is dried with warm air.

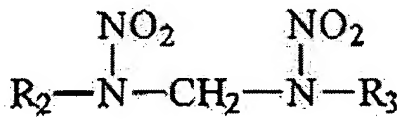
31. (Presently Added) A method according to claim 30, wherein, after drying the resulting powder mass, 0.01-2% graphite is added in a polishing drum to the powder mass to obtain a bulk propellant powder with a bulk density > 1000 g/l.

32. (Previously Added) A method according to claim 19, wherein the high-energy plasticizing agent is selected from the group consisting of nitroglycerine, diethylene glycol dinitrate, a substance with the structure



(I)

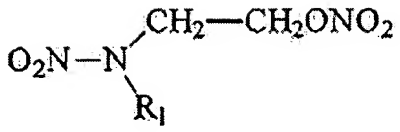
and a substance with the structure



(II)

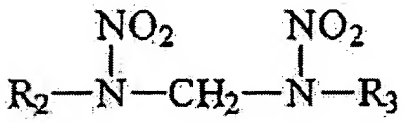
wherein R_1 = C_1-C_{10}-alkyl, C_1-C_{10}-alkoxy or aryl, R_2 and R_3 independent of each other C_1-C_5-alkyl or C_1-C_5-alkoxy and wherein the energizing plasticizing agent is used in amounts of 5-20% relative to the receptive grains.

33. (Previously Added) A method according to claim 32, characterized in that the high-energy plasticizing agent is selected from the group consisting of the structure.



(I)

and



(II)

with R_1 = C_1-C_4 alkyl, methyl, ethyl, n-propyl, i-propyl, n-butyl, i-butyl, or t-butyl, and with R_2 and R_3 independent of each other being C_1-C_2 (alkyl).

34. (Previously Added) A method according to claim 1, characterized in that the polymeric desensitizing agent is an organic ether or ester compound with a molecular weight of between 100-100,000.

35. (Previously Added) The method of Claim 33, wherein each of R_2 and R_3 is independently methyl or ethyl.

36. (Previously Added) The method of Claim 33, wherein R_1 is alkyl, methyl, ethyl, n-propyl, i-propyl, n-butyl, i-butyl, or t-butyl.

37. (Previously Added) The method of Claim 35 wherein R R_1 is alkyl, methyl, ethyl, n-propyl, i-propyl, n-butyl, i-butyl, or t-butyl.--